



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0589; Product Identifier 2017-SW-020-AD]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Limited Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2016-02-06 for Bell Helicopter Textron Canada Limited (Bell) Model 429 helicopters. AD 2016-02-06 requires inspecting certain tail rotor (T/R) pitch link bearing bores for corrosion and pitting. AD 2016-02-06 also requires a repetitive inspection of the sealant and repeating the inspections for corrosion and pitting if any sealant is missing. Since the FAA issued AD 2016-02-06, the FAA determined additional part-numbered T/R pitch link assemblies (links) are affected by the same unsafe condition and an additional repetitive inspection is necessary to address the unsafe condition. This proposed AD would retain the requirements of AD 2016-02-06, expand the applicability, and add a repetitive inspection. The actions of this proposed AD are intended to address an unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Docket: Go to <http://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- Fax: 202-493-2251.
- Mail: Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590-0001.
- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0589; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the Transport Canada AD, the economic evaluation, any comments received, and other information. The street address for Docket Operations is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

For service information identified in this NPRM, contact Bell Helicopter Textron Canada Limited, 12,800 Rue de l'Avenir, Mirabel, Quebec J7J1R4; telephone (450) 437-2862 or (800) 363-8023; fax (450) 433-0272; or at <http://www.bellcustomer.com/files/>. You may review the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy, Room 6N-321, Fort Worth, TX 76177.

FOR FURTHER INFORMATION CONTACT: Scott Franke, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email scott.franke@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to participate in this rulemaking by submitting written comments, data, or views. The FAA also invites comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit them only one time.

The FAA will file in the docket all comments that the FAA receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments received on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The FAA may change this proposal in light of the comments received.

Discussion

The FAA issued Emergency AD 2016-02-06 which was published in the Federal Register as a Final rule; request for comments on February 2, 2016, at 81 FR 5367 (“AD 2016-02-06”). AD 2016-02-06 applies to Bell Model 429 helicopters with a T/R link part number (P/N) 429-012-112-101, -101FM, -103, or -103FM installed. AD 2016-02-06 requires inspecting P/N 429-012-112-101 and 429-012-112-103 T/R link bearing bores for any aluminum oxide corrosion and then cleaning the affected area of the T/R link and inspecting for any pitting. If there is any corrosion or any pitting, AD 2016-02-06 requires replacing the T/R link. If there is no corrosion or pitting, AD 2016-02-06 requires applying corrosion preventative sealant. AD 2016-02-06 also requires, for all applicable T/R/ links, repetitively inspecting the bearing bore for missing sealant.

AD 2016-02-06 was prompted by AD No. CF-2016-01, dated January 5, 2016, issued by Transport Canada, which is the aviation authority for Canada, to correct an unsafe condition for Bell Model 429 helicopters. Transport Canada advised of an incident in which a T/R link on a Model 429 helicopter failed, causing vibration and difficulty controlling the helicopter. According to Transport Canada, the failure was caused by a crack that had initiated at a corrosion pit between the roll staked lip of the bearing and the beveled edge of the link. Transport Canada stated deficiencies in the application of corrosion resistant finishes to the link during manufacturing caused the corrosion.

Transport Canada further advised that this condition, if not detected, could result in failure of a link and loss of control of the helicopter. For these reasons, the Transport Canada AD required inspection of the T/R link and replacement of any link with

corrosion. The Transport Canada AD also required application of corrosion preventative sealant and re-identification of the T/R link.

Actions Since AD 2016-02-06 Was Issued

Since the FAA issued AD 2016-02-06, Transport Canada revised its AD and issued AD No. CF-2016-01R1, dated February 10, 2016, and AD No. CF-2016-01R2, dated April 12, 2017 (AD CF-2016-01R2). Both revised Transport Canada ADs clarify the applicable P/Ns, address spare parts, and address parts installed on-condition prior to December 7, 2015. AD CF-2016-01R2 includes a terminating action for the repetitive inspections.

Since the FAA issued AD 2016-02-06, improved T/R link P/N 429-012-112-111 and -113 have been developed that include the corrosion preventative sealant installed; however, recurring inspections of the sealant of these T/R links are still necessary since they are subject to the same unsafe condition due to design similarity. Some T/R links P/N 429-012-112-101 and -103 have also been field modified and re-identified as T/R links P/N 429-012-112-111FM and -113FM, and continue to need recurring inspections of the sealant as they are also subject to the same unsafe condition due to design similarity. Accordingly, the FAA proposes adding T/R link P/Ns 429-012-112-111, -111FM, -113, and -113FM to the applicability.

Additionally, because the corrosion preventative sealant could become damaged, not maintain seal, or wear away with use of the helicopter, this proposed AD includes a repetitive 12-month inspection with the corrosion preventative sealant removed. This proposed requirement is a more in-depth inspection for corrosion and pitting, due to any potential loss of the seal and build up of corrosion underneath the sealant over time.

This proposed AD would also change the visual inspection of each cleaned T/R link for pitting by requiring use of 10X or higher power magnification as specified in Bell Helicopter's related service information.

Comments on AD 2016-02-06

After our Final rule; request for comments was published, the FAA received comments from one commenter.

Request

Bell requested the FAA clarify its statement in the preamble of AD 2016-02-06 explaining that AD 2016-02-06 requires inspecting each T/R link bearing bore for pitting after cleaning while the Transport Canada AD requires inspecting for corrosion after cleaning. The FAA determined that an inspection for pitting instead of corrosion after cleaning was a more effective method of detecting the unsafe condition. While the cleaning process may remove corrosion, it will not remove pitting in the metal.

Bell also disagreed that a 10X or higher magnification is necessary for the inspection and stated that a visual inspection of the sealant is sufficient. The FAA disagrees. Corrosion can start in any small opening of the sealant and may be undetectable without magnification.

Lastly, Bell disagreed with AD 2016-02-06 not requiring re-identification of the link P/N. Bell stated that a modified part requires a distinct identification and that not mandating the re-identification could cause confusion among operators. The FAA disagrees that re-identification of the link P/N is necessary to correct the unsafe condition. If an owner or operator would like to add "FM" to the P/N to indicate that corrosive preventative sealant has been applied, then they may. However, the AD

requires repetitive inspections for all applicable parts, including those with “FM” in the P/N. Accordingly, re-identification is not necessary and does not affect compliance with the AD.

FAA’s Determination

This helicopter has been approved by the aviation authority of Canada and is approved for operation in the United States. Pursuant to our bilateral agreement with Canada, Transport Canada, its technical representative, has notified us of the unsafe condition described in the Canadian AD. The FAA is proposing this AD because the FAA evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information Under 1 CFR part 51

The FAA reviewed Bell Helicopter Alert Service Bulletin 429-15-26, dated December 7, 2015 (ASB 429-15-26), which advises of reports of corrosion on T/R links between the roll staked lip of bearing P/N 429-312-107-103 and the beveled edge of T/R link P/Ns 429-012-112-101/-103. ASB 429-15-26 specifies inspecting each T/R link bearing bore between the roll staked lip of the bearing outer race and the link bearing bore with 10X magnification for corrosion and if there is corrosion, replacing the link. If there is no corrosion, ASB 429-15-26 specifies cleaning the area and performing a second inspection with 10X magnification for corrosion. If there is corrosion, ASB 429-15-26 specifies replacing the link. If there is no corrosion, ASB 429-15-26 specifies removing the torque stripe, cleaning the area, and applying corrosion preventative sealant. ASB 429-15-26 also specifies re-identifying the P/Ns as 429-012-112-101FM/-103FM.

Further, ASB 429-15-26 specifies a repetitive inspection of the sealant and reapplication if the sealant is damaged.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Proposed AD Requirements

This proposed AD would retain the requirements of AD 2016-02-06 and would add P/Ns 429-012-112-111, -111FM, -113, and -113FM to the applicability. This proposed AD would also add use of 10X or higher power magnification to the visual inspection of each cleaned T/R link for pitting and a repetitive 12-month inspection with the corrosion preventative sealant removed.

Differences between this Proposed AD and the Transport Canada AD

This proposed AD applies to helicopters with certain link P/Ns installed, whereas the Transport Canada AD applies to helicopters with certain serial numbers instead. This proposed AD requires inspecting the bearing bores for any pitting after cleaning the T/R link, while the Transport Canada AD requires inspecting for corrosion after cleaning the T/R link. This proposed AD requires performing the inspections with 10X or higher magnification, while the Transport Canada AD does not specify any magnification. This proposed AD does not require re-identifying the P/N of the link, whereas the Transport Canada AD does. The Transport Canada AD also provides a terminating action to the repetitive sealant inspection, while this proposed AD does not. This proposed AD also requires a repetitive inspection with the corrosion preventative sealant removed and reapplied, whereas the Transport Canada AD does not.

Interim Action

The FAA considers this proposed AD to be an interim action. The design approval holder is currently developing a modification that will address the unsafe condition identified in this proposed AD. Once this modification is developed, approved, and available, the FAA might consider additional rulemaking.

Costs of Compliance

The FAA estimates that this proposed AD would affect 93 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this AD. Labor costs are estimated at \$85 per work-hour.

Inspecting the set of T/R links (eight bearings) for corrosion would take about one work-hour for an estimated cost of \$85 per helicopter and \$7,905 for the U.S. fleet per inspection cycle. Cleaning and inspecting the set of T/R links for pitting would take about one work-hour for an estimated cost of \$85 per helicopter. Replacing a T/R link would require no additional work-hours after inspection and required parts cost \$2,739 for an estimated replacement cost of \$2,739 per T/R link. Removing the torque stripe, cleaning, and applying sealant to the set of T/R links would take about one work-hour with a negligible parts cost for an estimated cost of \$85 per helicopter. Inspecting the sealant on a set of T/R links would take about one work-hour for an estimated cost of \$85 per helicopter and \$7,905 for the U.S. fleet per inspection cycle.

According to Bell Helicopter's service information some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage by Bell Helicopter. Accordingly, the FAA has included all costs in its cost estimate.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this proposed regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Will not affect intrastate aviation in Alaska; and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA prepared an economic evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2016-02-06, Amendment 39-18387 (81 FR 5367, February 2, 2016), and adding the following new airworthiness directive (AD):

Bell Helicopter Textron Canada Limited: Docket No. FAA-2019-0589; Product Identifier 2017-SW-020-AD.

(a) Applicability

This AD applies to Bell Helicopter Textron Canada Limited Model 429 helicopters with a tail rotor (T/R) pitch link assembly (link) part number (P/N) 429-012-112-101, -101FM, -103, -103FM, -111, -111FM, -113, or -113FM installed, certificated in any category.

(b) Unsafe Condition

This AD defines the unsafe condition as failure of a T/R link. This condition could result in loss of T/R flight control and subsequent loss of control of the helicopter.

(c) Affected ADs

This AD replaces AD 2016-02-06, Amendment 39-18387 (81 FR 5367, February 2, 2016).

(d) Comments Due Date

The FAA must receive comments by [INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(e) Compliance

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

(f) Required Actions

(1) For T/R link P/N 429-012-112-101 and -103, within 10 hours time-in-service (TIS):

(i) Remove each T/R link. Prior to cleaning the T/R link bearing bores, using 10X or higher power magnification, inspect each T/R link bearing bore for aluminum oxide corrosion extruding from between the roll staked lip of the bearing outer race and the link bearing bore. Aluminum oxide corrosion appears as a white crystalline material in contrast with the black finish and any accumulated soot. An example of this corrosion is shown in Figure 1 of Bell Helicopter Alert Service Bulletin 429-15-26, dated December 7, 2015 (ASB 429-15-26).

(ii) If there is any aluminum oxide corrosion, replace the T/R link before further flight.

(iii) If there is no aluminum oxide corrosion, clean each T/R link bearing bore with isopropyl alcohol, and using 10X or higher power magnification, inspect each cleaned T/R link for pitting.

(A) If there is any pitting, replace the T/R link before further flight.

(B) If there is no pitting, apply corrosion preventative sealant by following the Accomplishment Instructions, paragraph 5. of Part I, of ASB 429-15-26.

(2) For all T/R link P/Ns listed in paragraph (a) of this AD, within 50 hours TIS, and thereafter at intervals not to exceed 50 hours TIS, using 10X or higher power magnification, inspect each T/R link bearing bore for missing corrosion preventative sealant. If any corrosion preventative sealant is missing, perform the actions in paragraphs (f)(3)(i) and (f)(3)(ii) of this AD before further flight.

(3) For all T/R link P/Ns listed in paragraph (a) of this AD, within 12 months since date of manufacture, except if paragraphs (f)(1)(i) through (f)(1)(iii) of this AD have already been done for T/R link P/N 429-012-112-101 or -103 within the last 12 months and except if paragraph (f)(3)(i) and (f)(3)(ii) of this AD have already been done for T/R link P/N 429-012-112-101FM, -103FM, -111, -111FM, -113, or -113FM within the last 12 months; and thereafter for all T/R link P/Ns listed in paragraph (a) of this AD at intervals not to exceed 12 months:

(i) Remove each T/R link; and

(ii) Remove all corrosion preventative sealant, and perform the actions in paragraphs (f)(1)(i) through (f)(1)(iii) of this AD.

(4) After the effective date of this AD:

(i) Do not install T/R link P/N 429-012-112-101 or -103 on any helicopter before complying with the actions in paragraphs (f)(1)(i) through (f)(1)(iii) of this AD.

(ii) Do not install T/R link P/N 429-012-112-101FM, 103FM, -111, 111FM, -113, or -113FM on any helicopter before complying with the actions in paragraph (f)(2) of this AD.

(g) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Safety Management Section, FAA, may approve AMOCs for this AD. Send your proposal to: Scott Franke, Aviation Safety Engineer, Safety Management Section, Rotorcraft Standards Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5110; email 9-ASW-FTW-AMOC-Requests@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office before operating any aircraft complying with this AD through an AMOC.

(h) Additional Information

The subject of this AD is addressed in Transport Canada AD No. CF-2016-01R2, dated April 12, 2017. You may view the Transport Canada AD on the Internet at <http://www.regulations.gov> in the AD Docket.

(i) Subject

Joint Aircraft Service Component (JASC) Code: 6400, Tail Rotor System.

Issued in Fort Worth, Texas, on August 13, 2019.

Lance T. Gant,

Director, Compliance & Airworthiness Division,
Aircraft Certification Service.

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